

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
	)	
Numbering Policies for Modern Communications	)	WC Docket No. 13-97
	)	
IP-Enabled Services	)	WC Docket No. 04-36
	)	
Telephone Number Requirements for IP-Enabled Service Providers	)	WC Docket No. 07-243
	)	
Telephone Number Portability	)	CC Docket No. 95-116
	)	
Developing a Unified Inter-carrier Compensation Regime	)	CC Docket No. 01-92
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
Numbering Resource Optimization	)	CC Docket No. 99-200
	)	
Petition of Vonage Holdings Corp. for Limited Waiver of Section 52.15(g)(2)(i) of the Commission's Rules Regarding Access to Numbering Resources	)	
	)	
Petition of TeleCommunication Systems, Inc. and HBF Group, Inc. for Waiver of Part 52 of the Commission's Rules	)	

**Comments of GVNW Consulting, Inc.**

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## ***Executive Summary***

The Commission must decide which steps, if any, can be “streamlined” without negatively impacting the functionality of this complex system and without endangering public safety.

We believe that at a minimum the Commission should enact and **enforce** regulations as noted in paragraph 16 of the NPRM that “*ensure continued network integrity, allow oversight and enforcement of our numbering regulations, and protect the public interest.*” It makes no difference as to the technology platform deployed, any entity utilizing the scarce resource of NANP numbers should be required to adhere to industry standards. For example, if VoIP providers can obtain numbering resources wherever they want without reasonable parameters, it will definitely lead to number exhaust.

While Next Generation 9-1-1 (NG911) holds great promise to develop widely available IP technologies to create 911 services that are cost-effective and resilient and offer added capabilities of text, data and video, the question is how to provide a transition path that is safe to all consumers. While the Commission can issue a landmark Transformation Order and then six subsequent clarification orders designed to help ameliorate problems with the initial ruling, we respectfully submit that in the public safety area the correct number of “do-overs” is zero.

At present, there are vast differences between states in both funding distribution and readiness of carriers to implement NG911. Any ordered rollout will require careful coordination with state and local authorities in order to avoid any public safety disasters.

## **INTRODUCTION AND BACKGROUND**

In this Notice of Proposed Rulemaking (NPRM), Order and Notice of Inquiry (NOI), the Commission tees up three interrelated issues. First is a proposal to allow interconnected Voice over Internet Protocol (VoIP) providers to obtain telephone numbers directly from the North American Numbering Plan Administrator (NANPA) and the Pooling Administrator (PA), and we offer several comments and concerns on this process. The second issue relates to a limited technical trial of direct access to numbers. The third issue, which is addressed in the Notice of Inquiry, is the launch of the public policy debate on the range of issues regarding a long-term plan for managing number resources. We offer concerns as to various public safety aspects which are relevant both short-term and long-term.

As the Commission itself notes in paragraph 1, telephone numbers are a valuable and limited resource. We agree with the Commission that “access to and use of numbers must be managed judiciously to ensure that they are available as needed and to protect the efficient and reliable operation of the telephone network.

GVNW is a management consulting firm that provides a wide variety of consulting services, including regulatory and advocacy support on issues such as universal service, intercarrier compensation reform, technical support issues and strategic planning for communications carriers in rural America. We are pleased to have the opportunity to offer comments addressing the issues the Commission has raised in this docket focusing on important numbering resource issues.

## **DIRECT ACCESS TO NUMBERS BY INTERCONNECTED VOIP PROVIDERS**

To briefly review the current process of obtaining blocks of NANP numbers and the inherent system of checks and balances that has been used historically to protect the valuable resource of NANP numbers, we offer the following simplified overview.

On a legacy basis, the following is a brief description of the “typical” steps that must occur for an entity to obtain an NPA/NXX or a 1k block of telephone numbers. The first step is to acquire an Operating Company Number (OCN). This is obtained from NECA, which requires the applicant to have State Certification (or federal if wireless or paging carrier) and Articles of Incorporation or legal documentation stating the legal name of the company.

Once an OCN is established, the next step is to apply for an NPA/NXX via the North American Numbering Plan Administration (NANPA), NANP Administration System (NAS) or the Pooling Administration System (PAS) for a 1k Block (or to be a Code Holder for the purpose of establishing an LRN). Both departments (code administration and pooling) are managed by Neustar. A copy of the State Certification or FCC License for wireless/paging is required as supporting documentation along with one of the following:

- a. Relevant pages (cover page, area covered & signature page) from current executed Interconnection Agreement (ICA)
- b. Documentation of the state commission approval of the ICA
- c. Business Plan form stating Name, contact info for Service Provider (SP), Switch Common Language Location Identifier (CLLI) and address, Rate Center, LATA, and estimated trunk turn up date.
- d. A Confirmation letter or letter of intent provided by the LEC with which the requesting SP will interconnect.
- e. A letter from the requesting SP identifying a code in service in another rate center that already uses the same facilities and CLLI code that will be

used to serve the new rate center where the initial code is being requested and reflected on the application.

Once an NPA/NXX or 1k Block is assigned, the designated Administrative Operating Company Number (AOCN) loads in the Business Integrated Routing and Rating Database System (BIRRDs). Once loaded in BIRRDs, the NPA/NXX or 1k Block will filter down to the Local Exchange Routing Guide (LERG).

Once Numbering Resources are obtained, Service Providers are required to submit the semi-annual FCC Form 502 also referred to as the Numbering Resource Utilization/Forecast (NRUF). If the Service Provider will be in a porting or pooling environment, the Service Provider is required to establish a profile with the Number Portability Number Administration Center (NPAC) which is also managed by Neustar. The SP's SPID will need to be loaded along with the appropriate NPA/NXX(s) and Location Routing Numbers (LRNs). Note that the SP's Service Provider ID (SPID) is typically the SP's OCN. For example, a Service Provider may have multiple OCN's because they operate in various states but in NPAC, they may have all telephone numbers ported to a single SPID for the region, so there are times when the OCN/SPID relationship is not always 1-to-1.

The Commission must decide which steps, if any, can be "streamlined" without negatively impacting the functionality of this complex system and without endangering public safety.

We now discuss in turn the main topics raised in this section of the NPRM.

### Documentation Required

While we are sorely tempted to enter the debate on the appropriate regulatory classification for these providers, we will instead focus in this comment round on the more important issue of what should be required to ensure the integrity of the numbering resource. While these interconnected VoIP providers look and act a lot like CLECs and should obtain CLEC authorization from the State Commission as a part of a rational system of checks and balances, we believe that at a minimum the Commission should enact and **enforce**<sup>1</sup> regulations as noted in paragraph 16 of the NPRM that “*ensure continued network integrity, allow oversight and enforcement of our numbering regulations, and protect the public interest.*” It makes no difference as to the technology platform deployed, any entity utilizing the scarce resource of NANP numbers should be required to adhere to industry standards.

### Numbering Administration Requirements

At paragraph 24, the Commission addresses the important issue of accelerated number exhaust and waste of this valuable resource. If VoIP providers can obtain numbering resources wherever they want without reasonable parameters, it will definitely lead to number exhaust. It will be the same situation as paging carriers getting codes (but in this case it could be blocks) in almost every rate center and only using a handful in a timely manner. Footnote 79 indicates some alleviation<sup>2</sup> of this with the proviso that interconnected VoIP providers in those NPAs subject to pooling must return to the

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<sup>1</sup> The current state of affairs on the rural call completion issue has necessitated the emphasis above.

<sup>2</sup> Another step that should be considered if the Commission grants VoIP providers access to numbering resources is that there should be a process in place for carriers (such as Level 3) to return the telephone numbers that were obtained in preparation to sell/provide to the VoIP providers.

Pooling Administrator any unused blocks of numbers from that code for use by other service providers.

The discussion at paragraph 25 with regard to number pooling, where numbers are assigned in blocks of 1,000 rather than 10,000, merits study by the Commission as a long-term solution is developed for managing this scarce resource.

### Compliance Enforcement

If the Commission proceeds with allowing interconnected VoIP providers having direct access to numbering resources, the same requirements should apply that have a proven track record of success for managing the scarce resource: some form of qualification certification, OCN/SPID, and interconnection<sup>3</sup> with the ILEC in order to exchange local traffic.

## **ADDITIONAL ISSUES RAISED IN THESE PROCEEDINGS**

### Databases and Call Routing

Paragraph 41 raises the issue about the challenges posed from interconnected VoIP providers not appearing in the LERG, the database that enables carriers to send traffic to, and receive traffic from, a given telephone number. We recommend that interconnected VoIP providers should be required to obtain certification, update BIRRDS accordingly with their own OCN, submit the Form 502 report, and participate directly in NPAC. If and when an OCN is obtained, there should be no issues in participating in the BIRRDS and NPAC database.

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<sup>3</sup> We understand anecdotally that the VoIP providers may still have relationships with 3<sup>rd</sup> parties such as Level 3, but that should be separate from their obligations as an entity with direct access to numbering resources that would be tied directly to their own OCN.



### Routing Limitations

At paragraph 45, the Commission seeks comment on the routing limitations that interconnected VoIP providers currently experience. We recommend that VoIP providers should only be listed in NPAC if they (1) have a SPID, and (2) have direct numbering resources to which the ported telephone number would point to the “A” record of the LRN that is associated with the VoIP providers Operating Company Number (OCN).

### VOIP Interconnection

Paragraph 52 raises the issue of what the timing should be relative to addressing interconnection-related issue. We submit that the Commission should address interconnection-related issues **before** granting interconnected VoIP providers direct access to numbers.

## **NOTICE OF INQUIRY ISSUES**

### Public Safety

At paragraph 125, the Commission addresses public safety issues, noting that consumers today rely on the ubiquity and efficacy of 911 services to get help in an emergency. As the Commission analyzes whether removing geographic boundaries from number administration could raise new public safety concerns associated with 911 call routing and provision of location information, we offer the following.

While Next Generation 9-1-1 (NG911) holds great promise to develop widely available IP technologies to create 911 services that are cost-effective and resilient and offer added capabilities of text, data and video, the question is how to provide a transition path that is safe to all consumers. While the Commission can issue a landmark Transformation Order and then six subsequent clarification orders designed to help

ameliorate problems with the initial ruling, we respectfully submit that in the public safety area the correct number of “do-overs” is zero.

At present, there are vast differences between states in both funding distribution and readiness of carriers to implement NG911. Any ordered rollout will require careful coordination with state and local authorities in order to avoid any public safety disasters.

Respectfully submitted,

*Via ECFS at 7/12/13*

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